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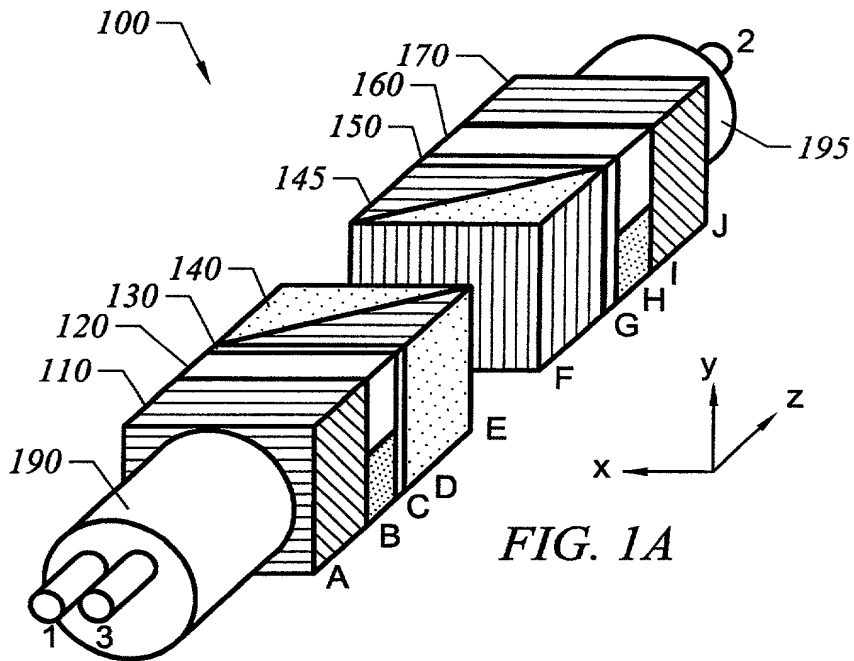


FIG. 1A

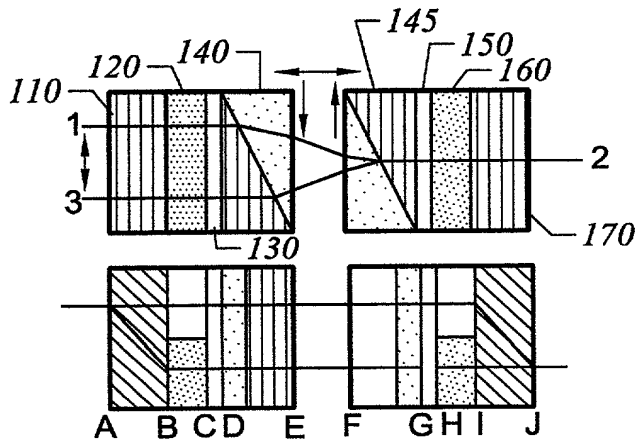


FIG. 1B

FIG. 1C

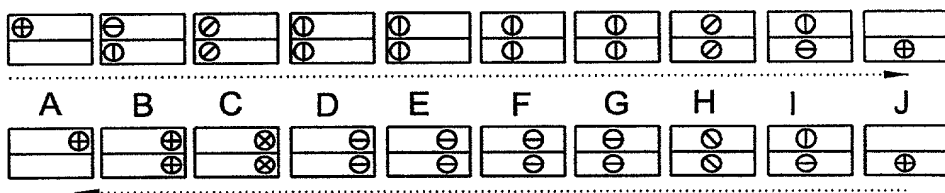
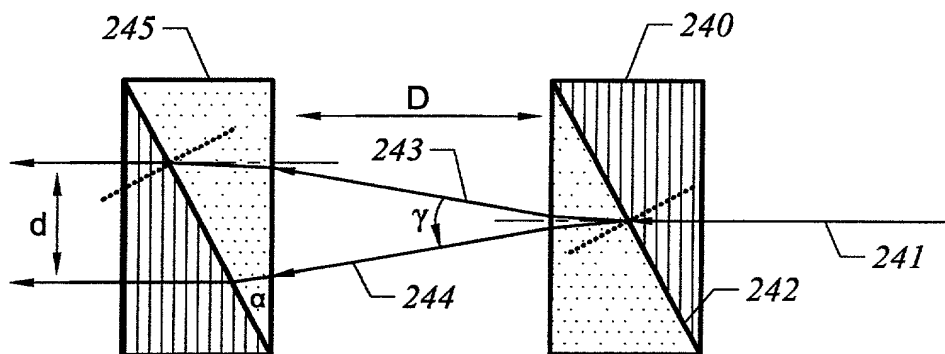


FIG. 1D

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$$d \approx 2D \tan(\gamma/2) = 2D \tan\{\arcsin[(n_o - n_e)\tan(\alpha)]\}$$

Example: $\alpha = 30^\circ$, $\Delta n = 0.2$, $D = 2\text{mm} \rightarrow d = 0.4\text{mm}$
 $4\text{mm} \rightarrow 0.8\text{mm}$

FIG. 2

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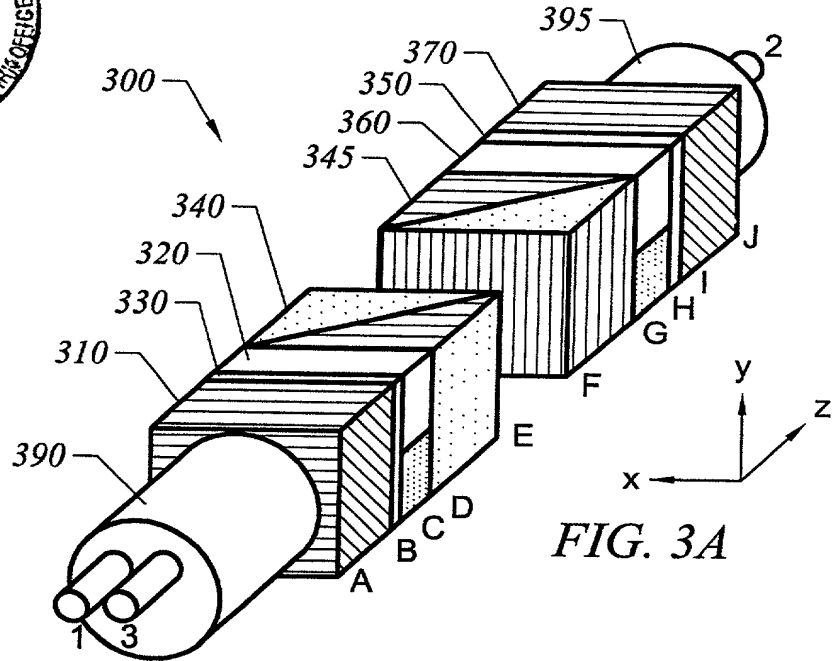


FIG. 3A

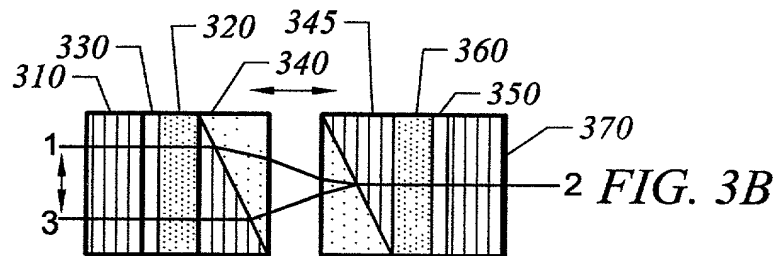


FIG. 3B

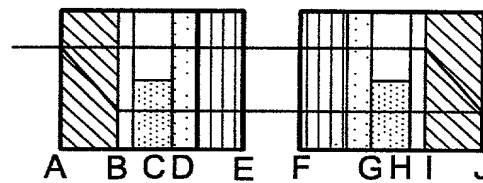


FIG. 3C

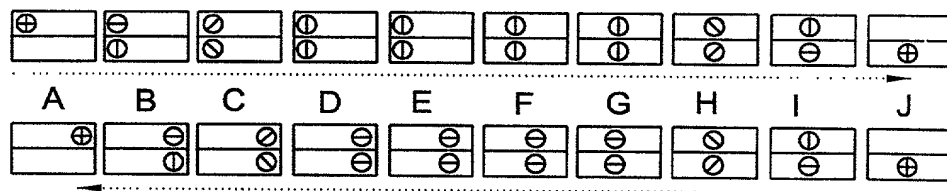


FIG. 3D

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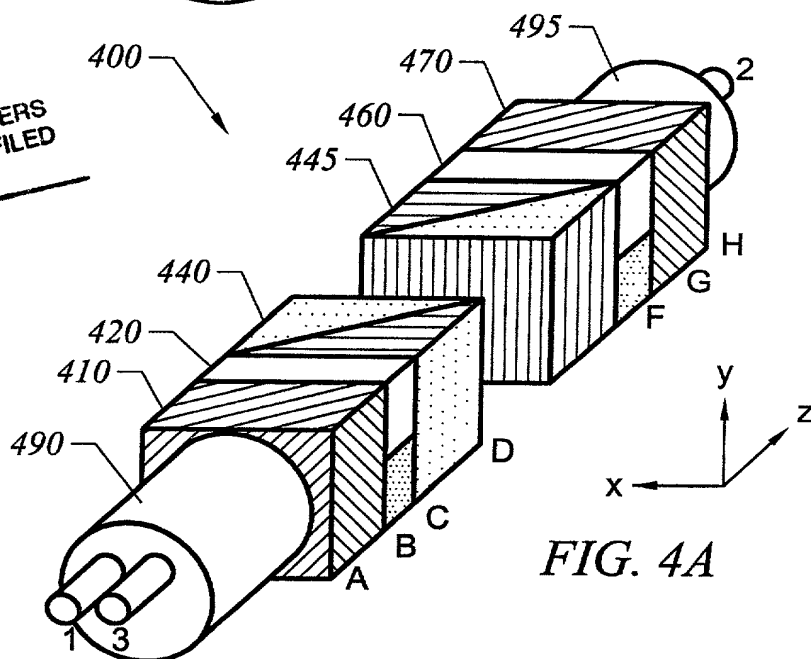


FIG. 4A

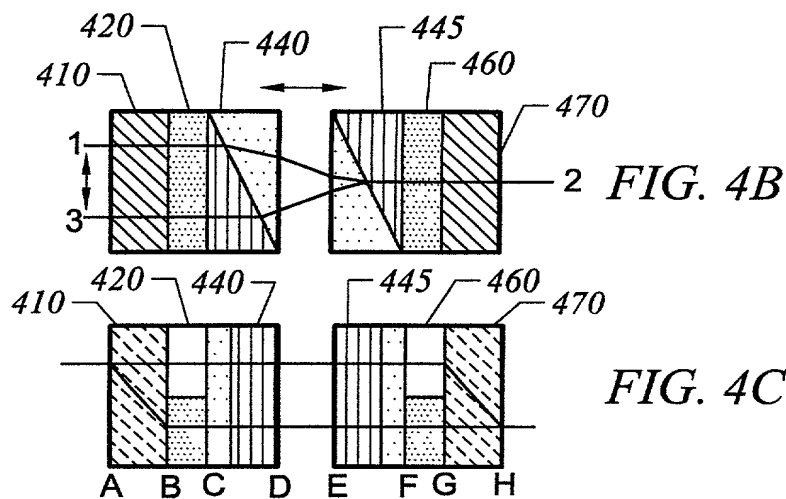


FIG. 4C

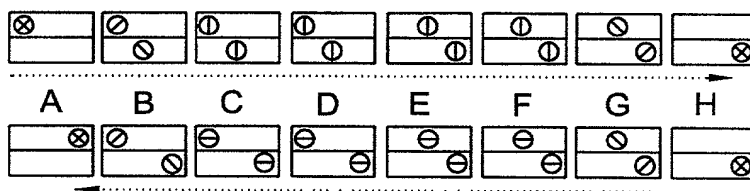
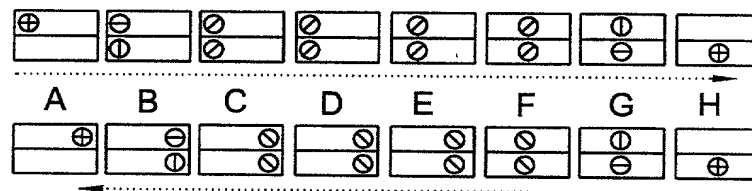
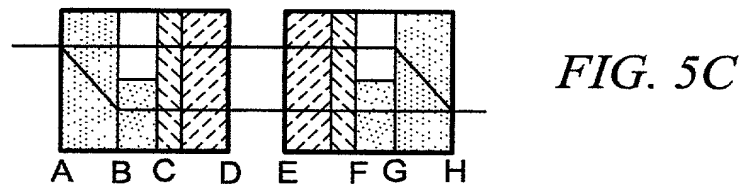
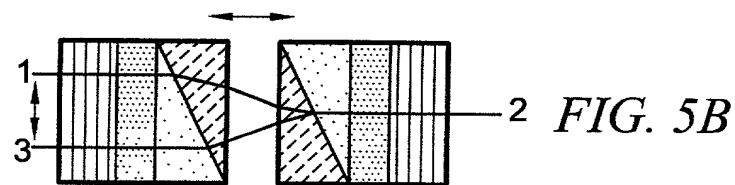
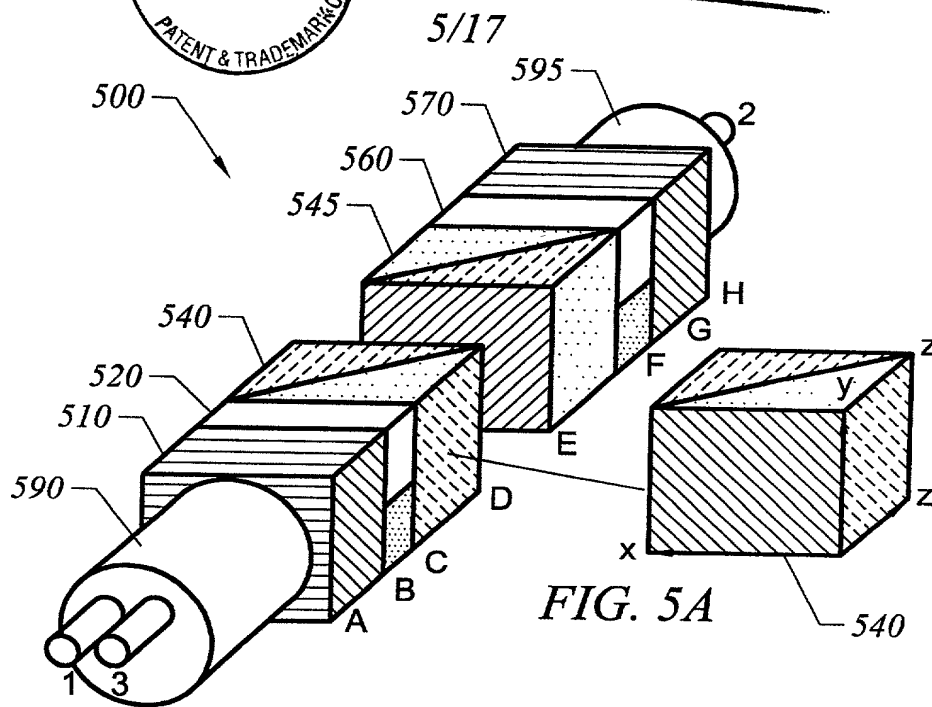


FIG. 4D

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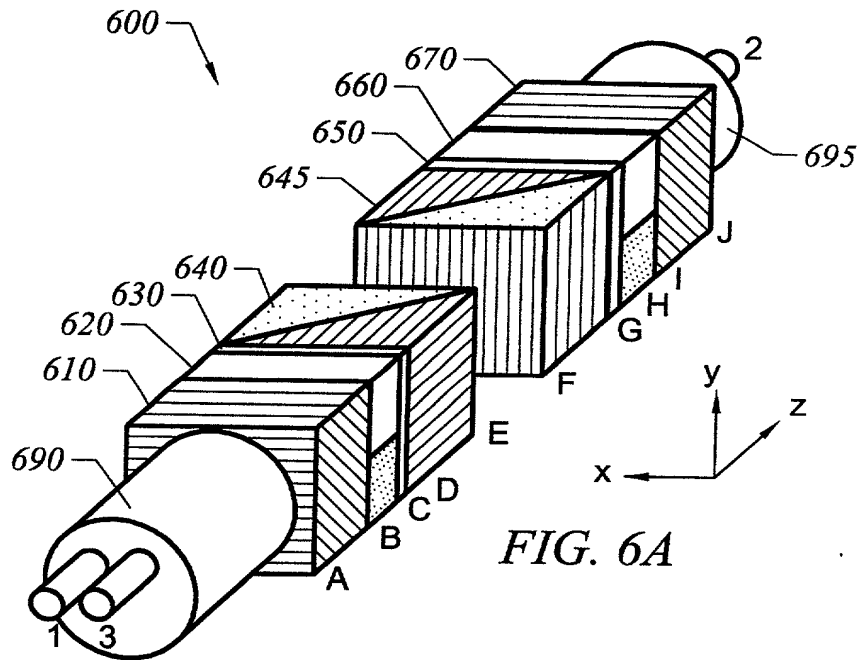


FIG. 6A

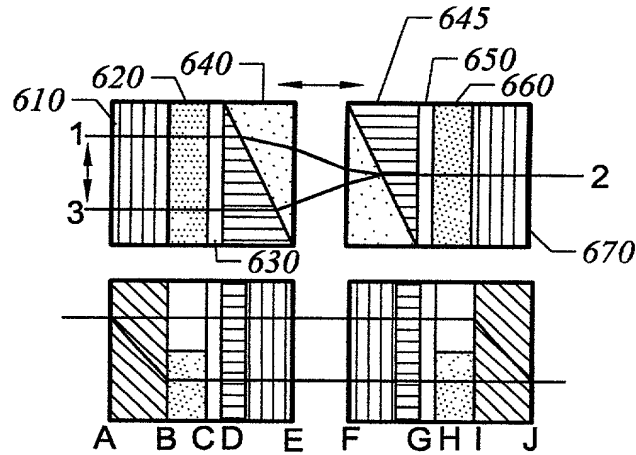


FIG. 6B

FIG. 6C

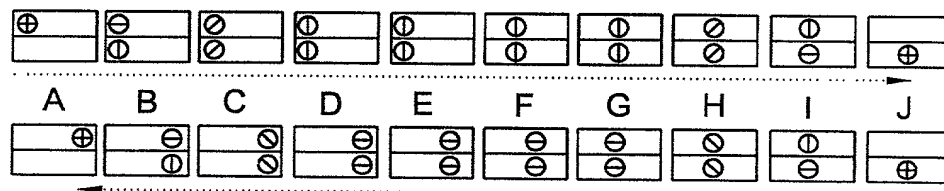


FIG. 6D

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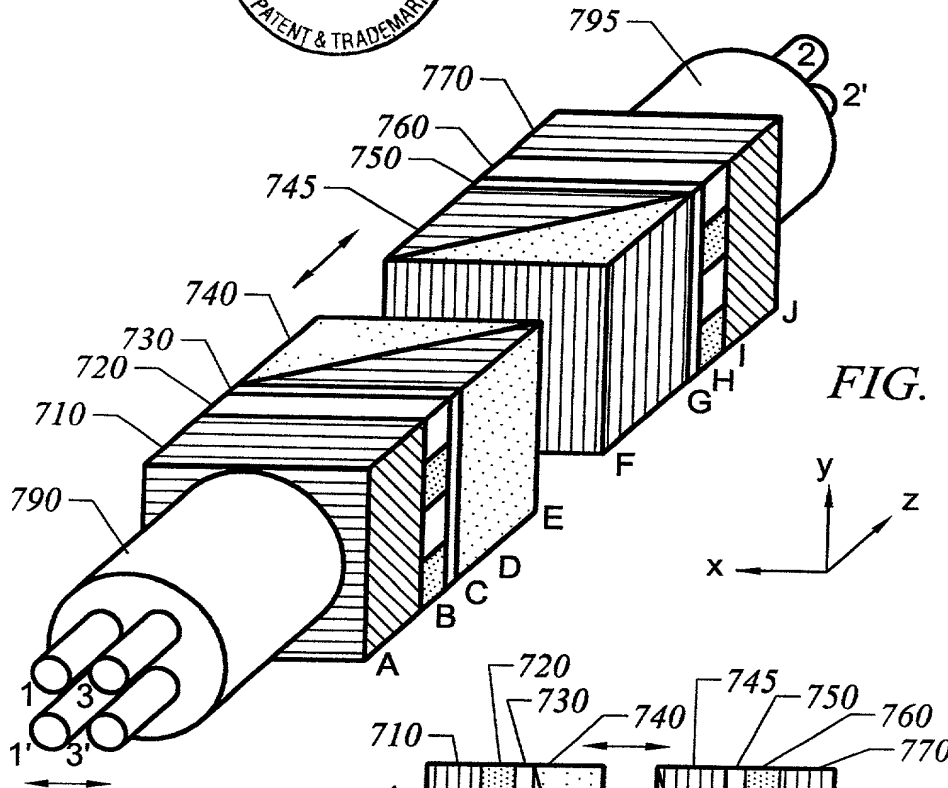


FIG. 7A

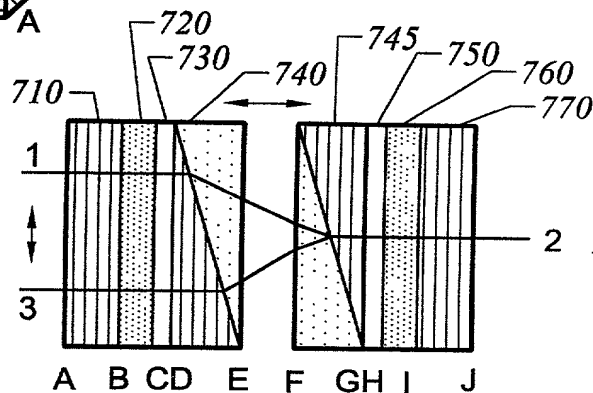


FIG. 7B

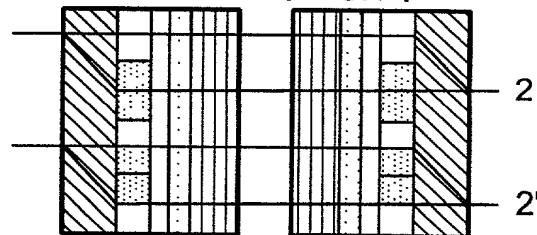


FIG. 7C

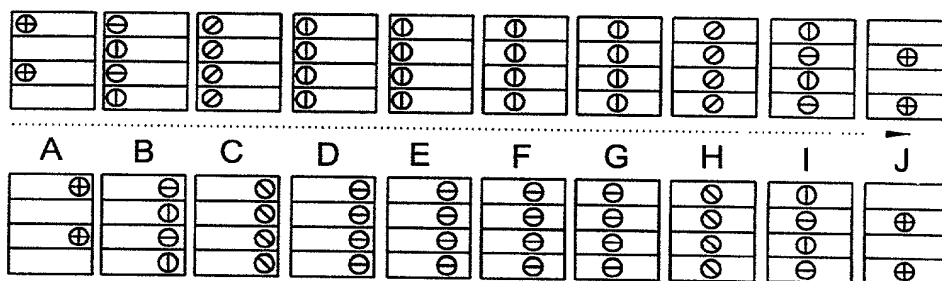


FIG. 7D

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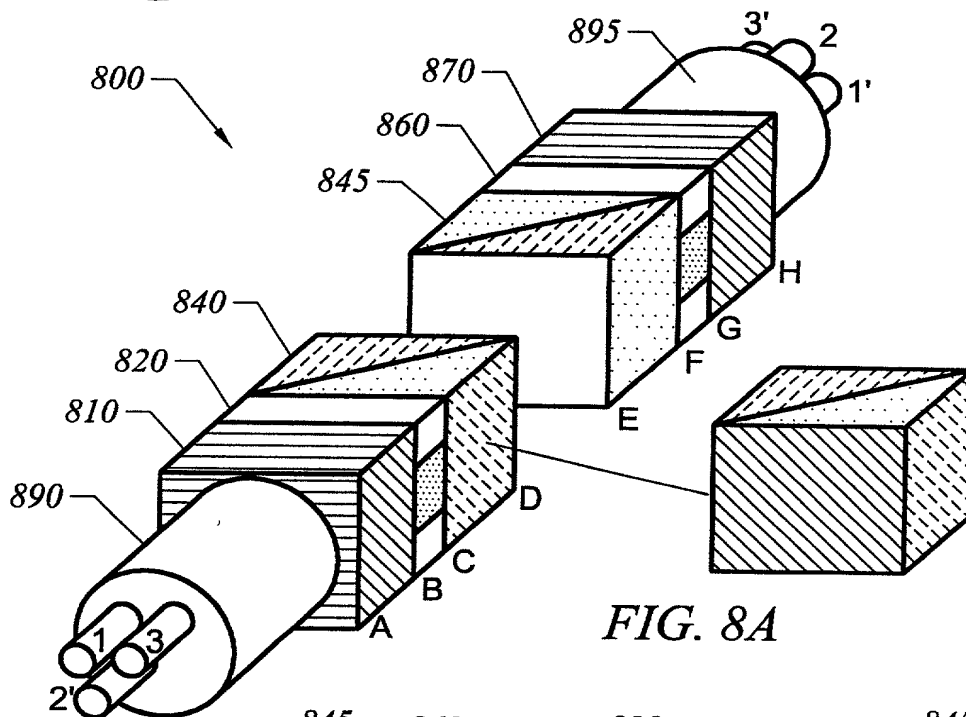


FIG. 8A

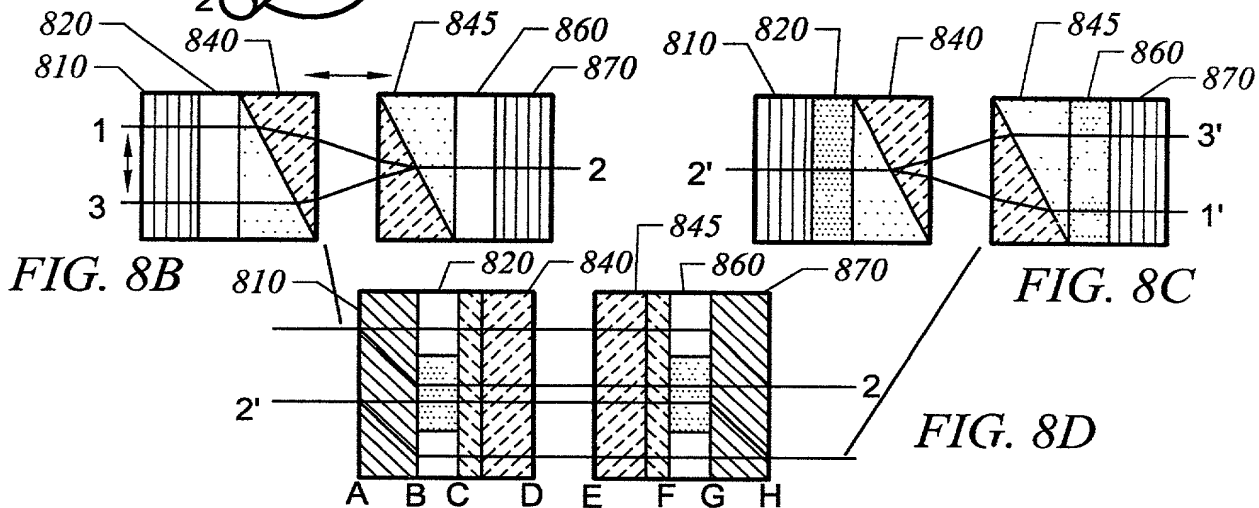


FIG. 8B

FIG. 8C

FIG. 8D

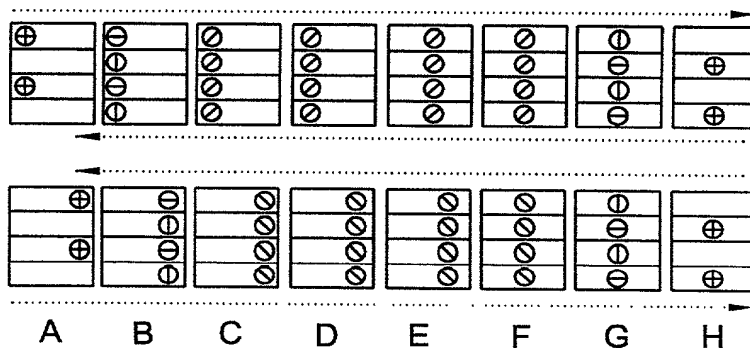


FIG. 8E



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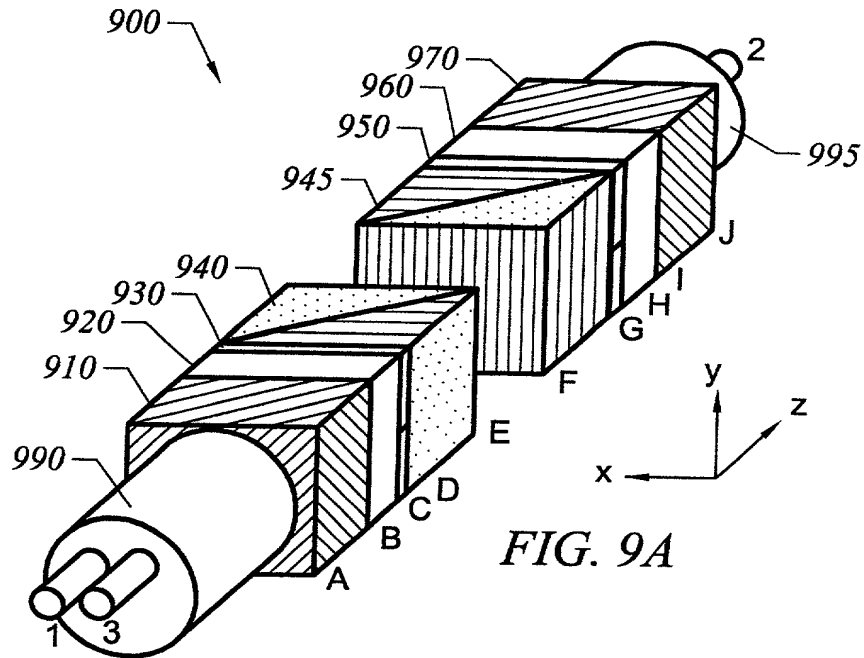


FIG. 9A

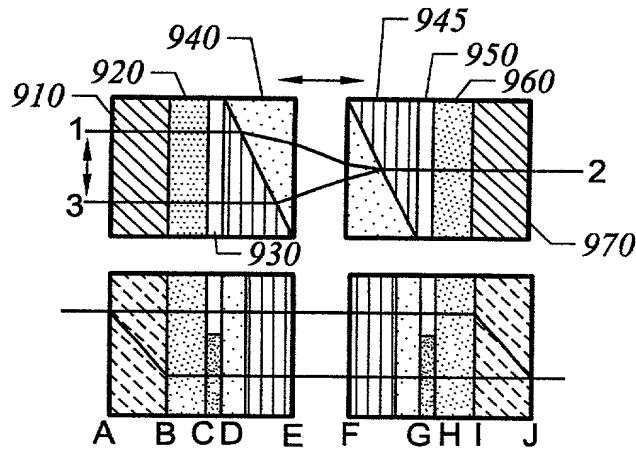


FIG. 9B

FIG. 9C

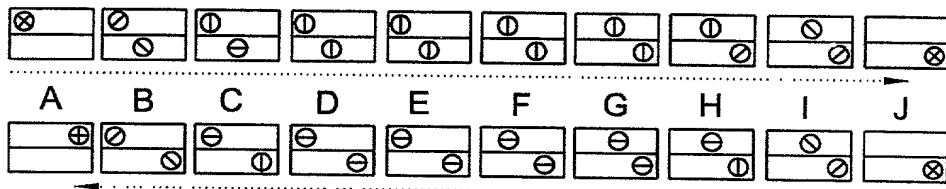


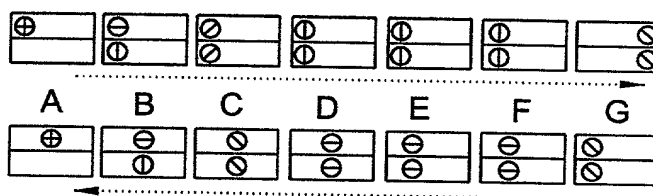
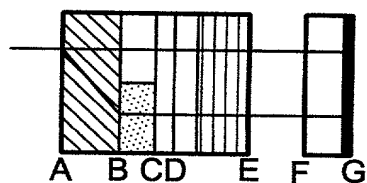
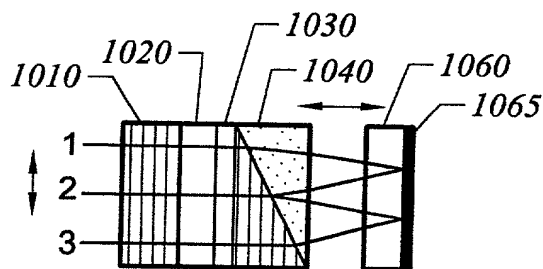
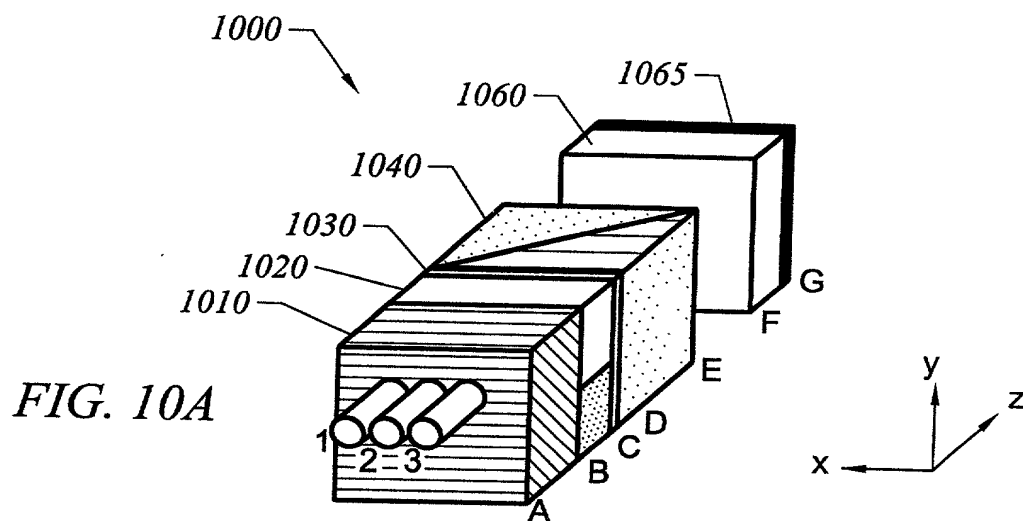
FIG. 9D

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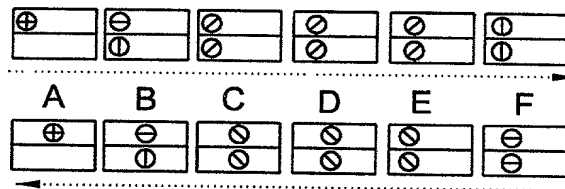
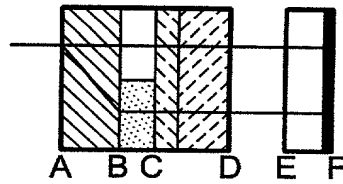
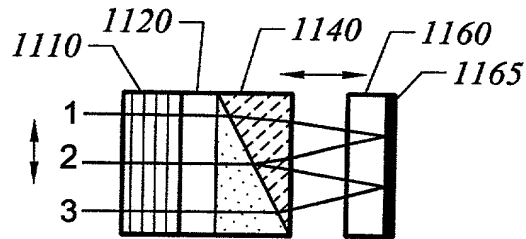
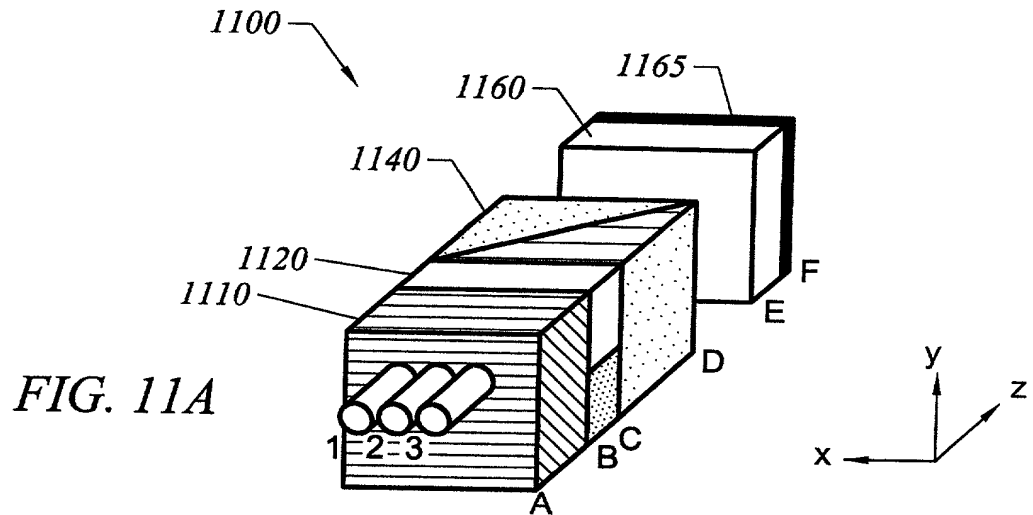


FIG. 11D

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Fabrication Process of a Circulator Array

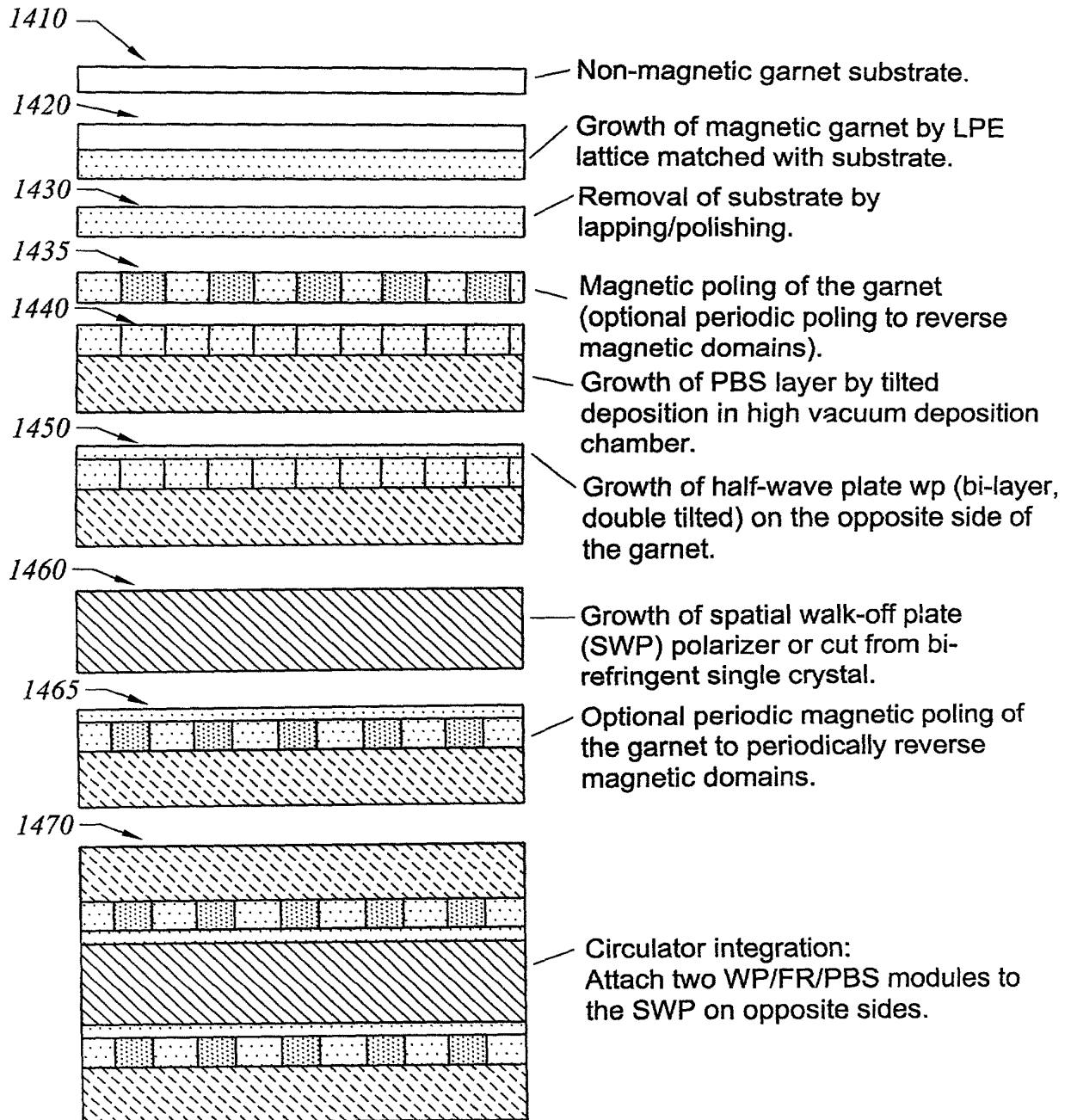


FIG. 12

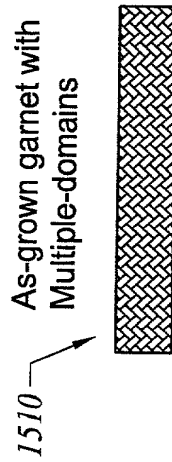
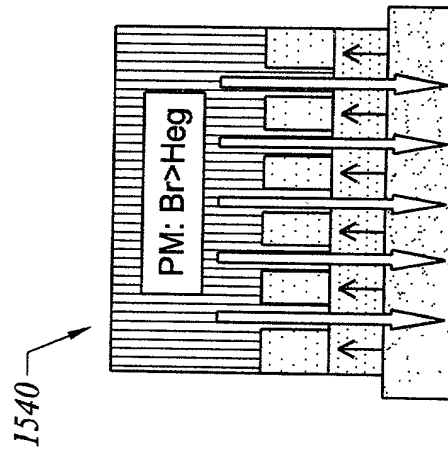


FIG. 13A



Cold poling: Only those domains contacting the magnetic tips are magnetically reversed.

FIG. 13D

Initial poling in high field

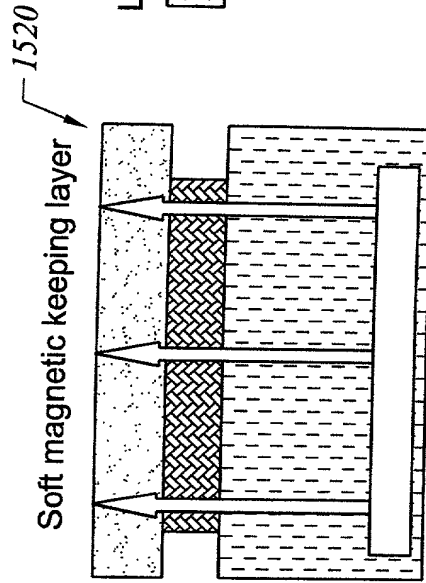


FIG. 13B

Second (periodical) poling

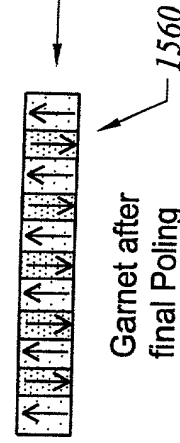


FIG. 13E

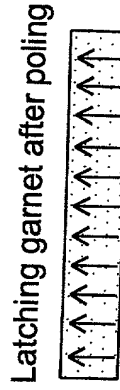
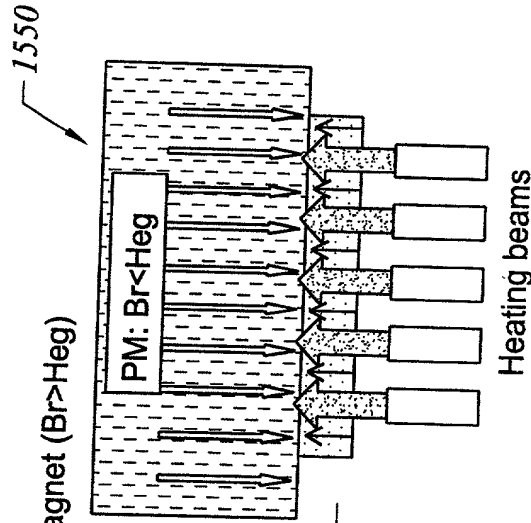


FIG. 13C



Hot poling: Only those domains illuminated by the heating beams are magnetically reversed.

FIG. 13F

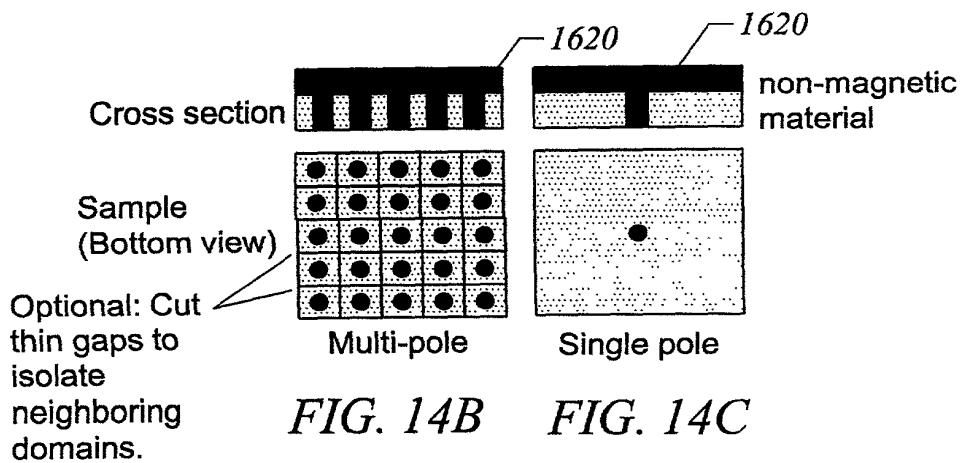
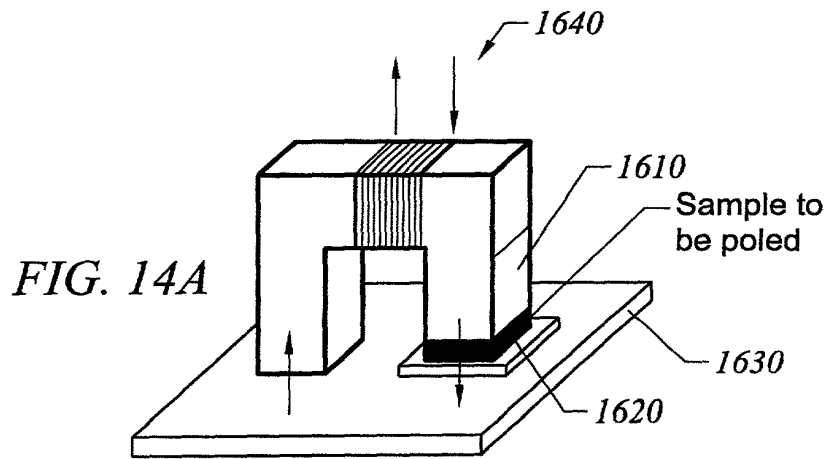




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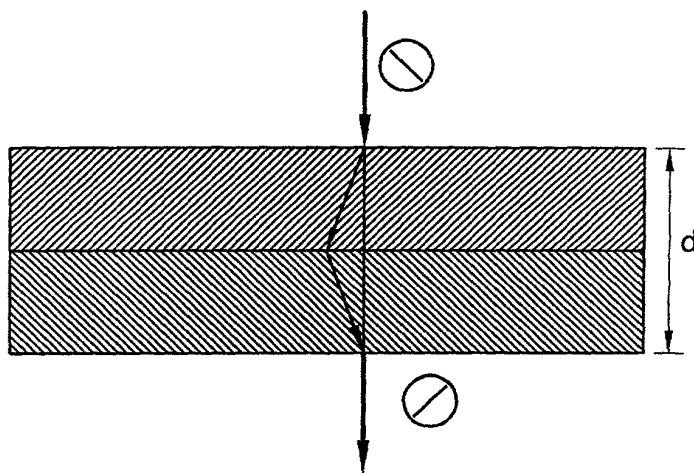
Magnetic (Periodic) Poling of Faraday Rotator





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Waveplate from bi-directionally obliquely deposited films

Half wave plate : $\Delta n \cdot d = \lambda/2$

The half-wave plate is capable of rotating a linearly polarized light by 2θ (where θ is the direction of polarization with respect to the optical axis before entering the wave plate).

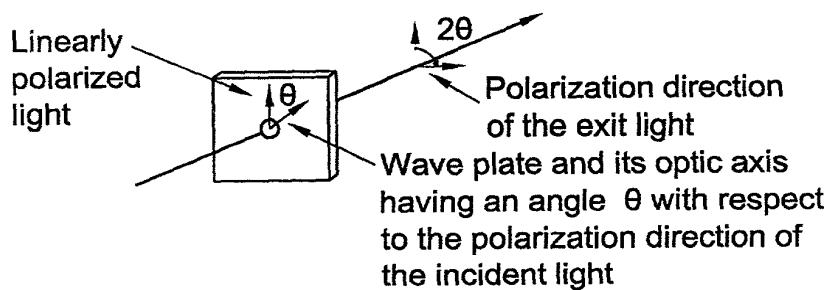


FIG. 15



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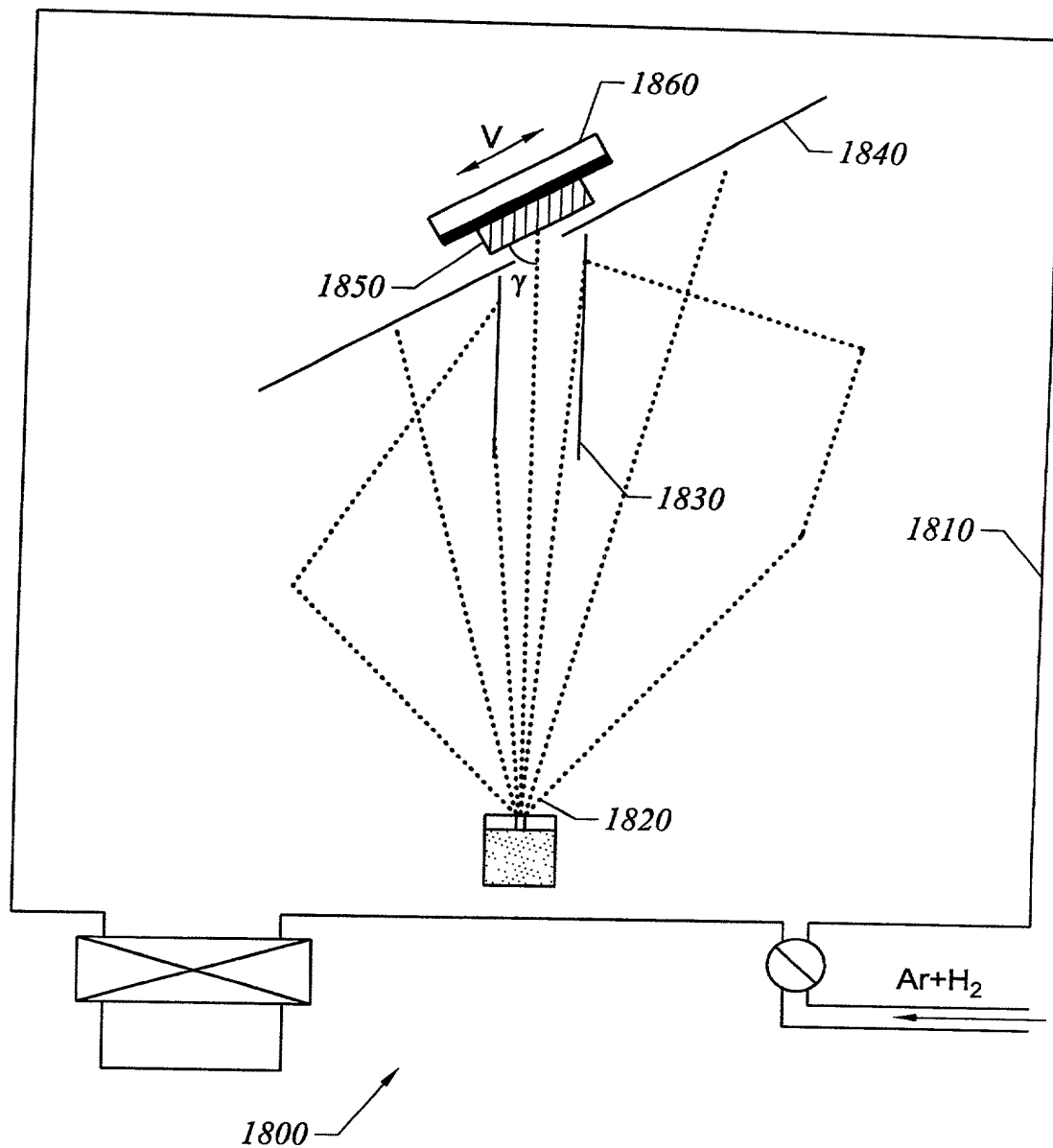


FIG. 16



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Fabrication Process of a Circulator Array

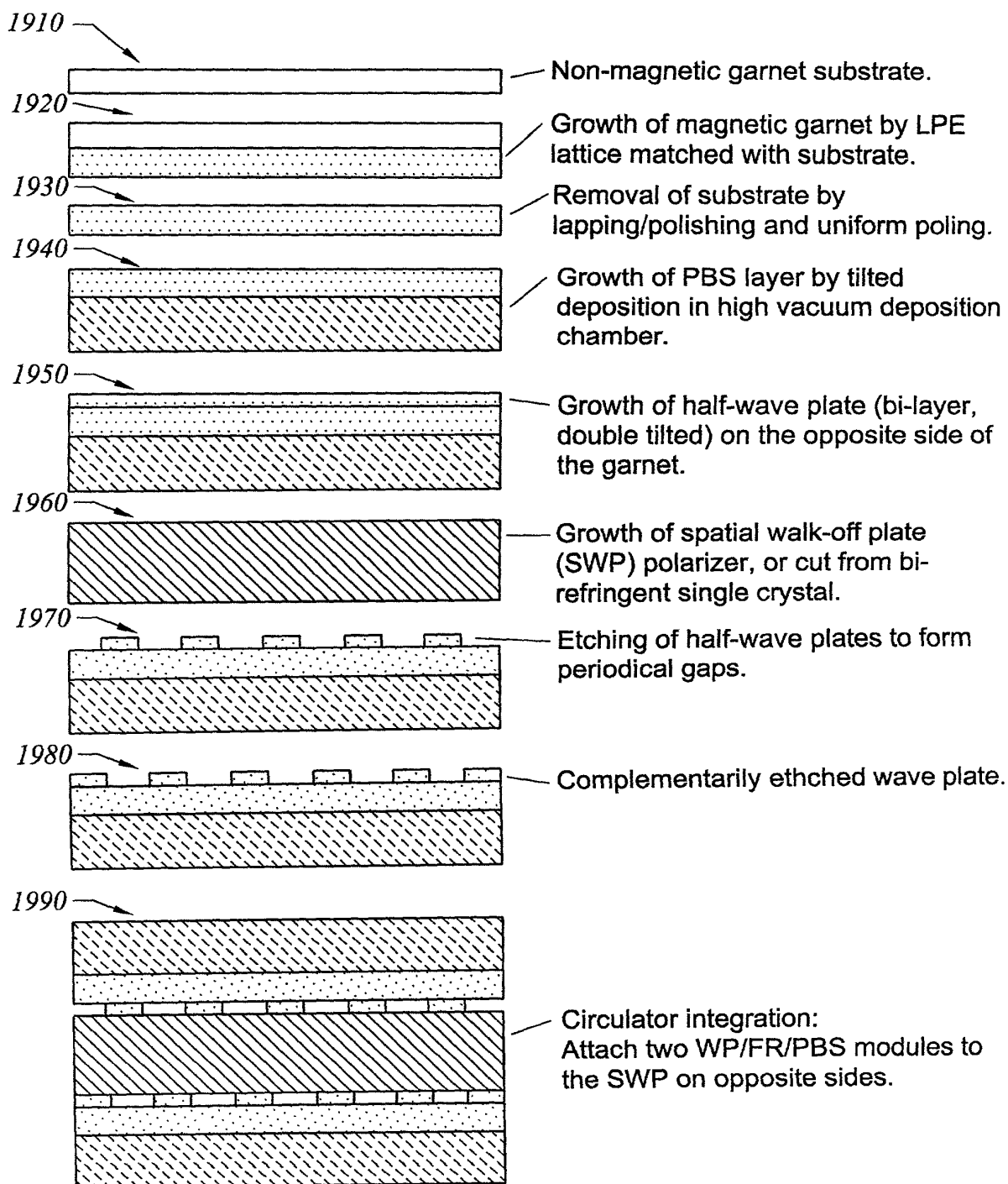


FIG. 17